

## **Peculiar Aspects in Influence of $\alpha$ 1-Adrenoceptor Stimulation on Isolated Rat Heart**

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### **Abstract**

The study examined the effect of  $\alpha$ 1-adrenoceptor stimulation with methoxamine on chronotropic function of isolated heart perfused ex vivo according to Langendorff and cardiac chronotropy in vivo. Stimulation of  $\alpha$ 1-adrenoceptors in isolated heart induced gradually developing bradycardia, which progressed during several minutes. Similar stimulation in vivo produced a short-term bradycardia probably terminated by the compensatory influences in the whole organism. Comparison of the data obtained in both experimental paradigms during  $\alpha$ 1-adrenoceptor stimulation revealed unidirectional changes in cardiac chronotropy characterized with time-related peculiarities.

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### **Keywords**

chronotropy, heart, methoxamine, rat,  $\alpha$ 1-adrenoceptor